

THE AGRICULTURAL MUSEUM.

OMNIS FERET OMNIA TELLUS. VIRG.

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To the Editor of the AGRICULTURAL MUSEUM

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Sm,

Few persons have a higher idea of the utility of Associations for diffusing knowledge, and stimulating the minds of men to useful exertion, than the writer of this ; he cannot, therefore, but rejoice at the establishment of the Agricultural Society, in this District. As composed generally of practical Agriculturalists, and for the furtherance of their pursuits, it appears to be taking a direction towards objects of minor importance, altho' highly patriotic and of great national utility. You will, no doubt, perceive, I allude to the Premiums given for those products of Art and Manufacture, which, at your Exhibitions, place on the pinnacle of fame the good House-wives and domestic Spinsters of our country. I will not now attempt an examination of how far, in our present state, it is preferable to direct domestic exertions in manufacture to superiority of quality, rather than to an increased quantity of home made articles : whether it would not be better, that our domestic industry should be applied to the relief of our most pressing and indispensable wants, now supplied from other nations, and to the increase of real comforts, rather than to rivalling the finer manufactures of a more luxurious people,—manufactures which require great subdivision of labor, and extensive capital to carry them on profitably ; and, whether in some degree it is not defeating a great object of the Institution.

A Society for the encouragement of the Arts, Manufactures and Commerce of our country, would begin as our Agricultural Society have ;—whilst the views of its members would extend to these objects only, they would be

If a large portion of this grass is to be kept hained up for winter, and the season be not favourable, autumn rains, followed quickly by frost, will kill very much of the faggage, and the sheep will consequently be very hard driven for food from Candlemas to the next shoot of grass, however late that may be. The quantity, indeed, of stock to be carried per acre, as well as their health and good condition, must be in proportion as there is more or less produce; and on the competent and regular supply of food, the growth of good wool wholly depends. To elucidate this subject, I cannot do better than give Dr. Parry's general statement of my claim for the Bath Society's premium, offered "for a change of breed of sheep, with positive profit resulting therefrom," and his conclusions thereon, which is, on all hands, acknowledged to be one of the most able sketches ever given to the public.

"About the year 1800, Lord Somerville's stock (as stated by him in his Memorial to the Society) consisted of forty-five ewes, of the long-wooled sort. Finding these annually degenerating, and also becoming annually less profitable, he changed them, at the above mentioned period, for one hundred and fifty Ryeland ewes. In the first year, though the winter was severe, the ewes supported themselves tolerably well, and the lambs were in very good order at weaning time. In their future growth, as wethers and store ewes, they far exceeded in weight their parent stock. One lot of the wethers sold as high as three pounds each, and were fed upon grass and hay only. In the following year, Lord Somerville brought from Spain some rams and ewes, of the Merino breed. These rams, in each subsequent year, have been, and now continue to be put to ewes of the South Down and Ryeland breeds; from each of which crosses a valuable species of sheep has been obtained, both in fleece and carcass, the relative value of which has been detailed by his Lordship, in his Memorial of 1802; the substance of which is, that South Down store ewes, at three pounds

per fleece, and at 1s. 10d. per pound, will pay 5s. 6d. per fleece ; which, at 6 1-2 per acre, in good upland pasture for seven months, and five months in turnips, at 14 or 15 per acre, will pay 38s. or 40s. per acre. Ryeland store ewes, two pounds and a quarter per fleece, at 2s. 2d. per pound, untrinded, nine sheep per acre, and turnips as above, will pay 2l. 3s. 10 1 2d. per acre.

“ South Down and Merino ewes, of the half breed, at four pounds per fleece, clean washed, and 3s. per pound, will amount to 12s. per fleece ; which, at 7 1-2 per acre, for seven months, amount to 4l. 10s. per acre, for the pasture land, with turnips as above for winter keep. Ryeland and Merino ewes, of the half blood, at 10 per acre, for seven months, and turnips as above, at 3 1-4 pounds per fleece, and 3s. 2d. per pound, amounts to 6l. 10s. 5d. per acre.

“ The pure Merino fleeces never sold at less than one guinea each ; the average weight of which has been more than six pounds each, in the yolk ; and on the above allowance of pasture for seven months, and turnips as above, in aid of that pasture, the return will amount to ten guineas per acre.

“ At the last meeting of the Society, a paper having been read, as the report of a Committee appointed by the Society to examine the state of that part of the farm of Lord Somerville, which is appropriated to the feeding of sheep, the Society ordered that report to be printed, and sent to various members for their consideration, previously to the next meeting, in November, at which they were requested to deliver their opinions on the said report. A method of proceeding, so new to this Society, must have implied, not surely that the facts there stated, were incredible, but that the subject itself was so important to individuals and the community, that every circumstance relative to it could not be too thoroughly investigated, or too generally known. The Society will please to recollect, that this report is that of a Committee nominated by themselves, to examine Lord Somerville's

claim to the premium, Class 4, No. 15, p. 45. which is offered to the stock farmer who shall have bred and kept, in the usual mode of husbandry in the neighbourhood, the greatest number and most profitable sort of sheep, in proportion to the size of his farm, in consequence of his having changed his sort of sheep from what had been usually kept on the farm, or on similar farms in the neighbourhood.

"In order that a breeding farmer may maintain the number of his stock, he ought to sell in the year no more store-sheep than will be supplied by his lambs. It appears, however, that Lord Somerville disposed of forty-six more than his proportion: that number should, therefore, probably be set in abatement of his profit for the year.

"The average price of the sale sheep having been 1l. 17s. 2 1 4d. the sum to be deducted will be 85l. 12s. 6d.

"We are now prepared to state the general accounts:

	l.	s.	d.
Wool	446	0	0
Store sheep sold	409	3	0
Fat sheep	238	16	0
Letting of rams	524	10	0
Turnips to two bulls	4	12	0
Total	1623	1	0

Deduct

Keep of sheep . . .	1	18	0	0
Hay at 50s. per ton .	15	0	0	
Diminution of stock .	85	12	6	—118 12 6

This leaves a balance of . . . l. 1504 8 6

"Which is 9l. 1s. 3d per acre; or, if the 524l. 10s. for letting rams, be deducted, the balance will be 979l. 18s. 6d. which is 5l. 18s. per acre. If the allowance of fifty five acres, for extra stock, as above stated, be thought too great, the return per acre must suffer a proportionable abatement:

" I must add, that the average value of Lord Somerville's sheep land, does not exceed 36s. per acre. From this view of all the particulars of the report, I am of opinion, not only that Lord Somerville is intitled to the premium offered by this Society, but that he justly merits the most grateful acknowledgements of his country.

" C. H. PARRY."

" 14th Nov. 1804."

The second Essay which was given in on this claim, not being in print, I have great pleasure in being enabled to give it entire. No man is more competent to give an opinion in these points, than the writer, whether we advert to his ability or integrity.

"I had the honor to receive the report of the Committee appointed to investigate the claim of Lord Somerville to your premium, No 15, Class 4; with a request that I would attentively examine the same, and furnish the next meeting with my observations. Having for some years had experience of the Merino breed of sheep, and the usual crosses of them, I am the less surprised at the result of that investigation, so highly favourable in profit to that particular sort of sheep. To the exertions of your Society, in that branch of agriculture which relates to the improvement of our clothing-wools, the country is likely, in due time, to reap the most important advantages. A project which, by many, was considered as a wild and fanciful theory, and which at first had to encounter the most obstinate prejudices, has been gradually and steadily advancing. The various specimens of superfine cloths and kerseymeres, manufactured from wool of British growth, which have been exhibited at several of your last annual meetings, have, I trust, been satisfactory proofs of the practicability of improving our native wools to a degree far surpassing what was expected in so short a time, even by the most sanguine. It had been, as I understand, a point long settled with the manufacturers, that superfine broad cloth could only be made of Spanish wool, and that any admixture of Bri-

fish wool degraded the quality of the cloth, and disgraced the Manufacturer. To many, this seemed an alarming circumstance, and it surely was a matter of just regret, to find that the most precious fabrics of our grand staple manufacture depended upon the precarious supply of a foreign, and oftentimes a hostile country. To render this kingdom independent of a foreign supply, of so requisite and so valuable a raw material, must always have been a desideratum to the patriot, and the politician. In this point of view, it was an object worthy of your Society to promote, to the utmost of your power, so laudable an achievement. The efforts of Lord Somerville, Dr. Parry, and some other members of your Society, have been, I doubt not, duly appreciated; and you have seen, both in the wool and in the cloth and kerseymere produced from the Merinos, and their respective crosses, such articles as, ten years ago, no one would have admitted the practicability of raising on our soil, and under the influence of our climate. However, the patriotism of individuals, or even the efforts of a society like yours, would be able to effect but little in so extensive a design. To point out its utility, and to shew its practicability, would be all that could be expected in the early stages of the undertaking. Whatever benefit the country might derive from raising superfine wool for our own supplies, little could be expected to result from the theory, unless it should be made to appear clearly, that it was manifestly the interest of the individual to promote it. With a view to ascertain this, I presume your premium was framed; and, in this light, the report of your committee appears to be very important. To me, from my own experience, it is perfectly satisfactory. The South Down and Ryeland sheep, with which this comparison has been made, are, in my estimation, among the best races of the kingdom. The return of Lord Somerville's South Down wool was 5s. 6d. per fleece. My average has been, in general, not more than 4s. 6d.; that of my Ryelands about the same as his. In the year 1803, my sheep

of the Merino and South Down, and of the Merino and Ryeland first cross, produced me an average of three pounds six ounces each, which brought me 11s. 6d. per fleece. My thorough-bred Merino fleeces of that year, twenty-six in number, weighed in the yolk five pounds fourteen ounces each, and sold for 18s. 9d. per fleece. This year, my pure Merino fleeces, fifty-seven in number, weighed in the yolk, three hundred and forty-eight pounds, which is more than six pounds per fleece. My fleeces of the first cross, weighed this year, three pounds eight ounces each. The present years price of my wool I have not yet ascertained. It will appear, therefore, that the result of Lord Somerville's return from the different sorts of sheep, accords as minutely as distance of place and difference in management will allow.

" In respect to the number compared to the extent of Lord Somerville's farm, they will appear to be placed very thick upon the ground. However, my own experience agrees very much with this result ; and I have no doubt, making allowances for my other stock, but I have this year, had equal numbers, in proportion to my means of keeping them. My flock consists of nearly the same numbers as Lord Somerville's ; to the management of which, I find a man and his son, of ten years of age, fully competent. I have yet met with nothing discouraging in the propagation of this new race of sheep ; on the contrary, they have far surpassed my expectation. Since the year 1801, they have done well in a sheltered spot in the vale of the Severn ; and they are doing well in a high situation in the heart of Staffordshire. Since the year 1811, I have lost but three Merino sheep, one in yeanning, another, I believe, from old age, and one from a stoppage in the stomach. From the smallness of the number of this race in the kingdom, I should not think myself justified in making experiment of the hardships they would be capable of enduring : a little extra care would be well repaid in most of our native breeds. The very few Merino lambs I have lost, compared with the common casual-

ty, is a proof of this. I have, this season, put four hundred and fourteen ewes all to Merino rams, and I am endeavoring, as fast as I can, to bring my flock to that blood, convinced of their utility, both in a public and in a private point of view. From the distance at which I now reside from Bath, I unfortunately am little acquainted with your transactions. Whether Lord Somerville has any competitor, I know not ; but I think, from the report of your committee, that it will be difficult to find a stock farmer, who, in proportion to the size of his farm, possesses a greater number, or a more profitable sort of sheep. I am very sorry it is not in my power to attend personally ; and I trust the Society will excuse the defects of this hasty communication.

I have the honour to remain, Sir,

“ Your obedient, humble servant,

“ G. TOLLETT.”

“ P. S. The letting of the rams may, to some, appear a temporary rather than a permanent source of profit. However, from the price of Spanish wool, and from the interest which the country begins to take in this line, the rams are likely, for a long time, to be in great request. But, putting them out of the question, Lord Somerville appears to have made from his wool, and his store and fat sheep, as much as, I suppose, will cover two rents of the whole farm of 460 acres ; but which return, in reality, has been made from 188 acres only. From the price of the store sheep sold, I should presume many of them were the draft ewes of the English breed ; as ewe sheep, with any cross of Merino, would have unquestionably brought a higher price : so that, when the drafts come from that stock, if wool bears the present price, the profits will be considerably greater. I have now some two-shear wethers of the half breed, of South Down and Ryeland, that would weigh from twenty pounds to twenty-five pounds per quarter ; they are decidedly better than the South Downs of the same age, that have

been bred and kept with them ; I think they have stood the climate of this country better."

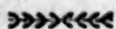
"To the Bath Agricultural Society, Nov. 9, 1804."

We ought, perhaps, to apologize for these details, which many may think prolix ; but it must not be forgotten, that subjects of this nature are liable, beyond any others to misconstruction ; sometimes to selfish and wilful misrepresentation.

It was unfortunately and falsely conjectured, that attempts were made to prejudice the minds of the people against the long-wooled breed ; on the contrary, by a caution against their adoption in soils and climates ultimately unpropitious to these breeds, essential service was done them. By attempting to prove too much, we are apt to prove nothing. Any man then, who studies wool bearing animals, must with regret hear the advocates for certain distinguished long-wooled breeds assert, that they will do well on Snowdon, and prove on Plinlimmon ; and yet such language has not unfrequently been held.

The dignity and utility of this subject, has been acknowledged in all ages, and in every corner of the civilized world ; we love it for its own sake ; and it is necessary we should do so, to endure with patience the unworthy treatment to which it too often exposes us. We shall never be induced to make it subservient to dirty, political intrigue.

[To be continued.]



COTTON FACTORIES.

I have employed no small part of the time since I have been in Manchester in visiting those extensive manufacturing establishments, which are the wonder of the world and the pride of England. Every facility has been afforded, by the proprietors, in the most liberal and attentive manner, which could give me the fullest view of

those works that furnish the United States so a large a part of their clothing. But, after all, I find very little to write on a subject where you will be prepared to expect much. An attempt to describe the intricate machinery, and the curious process by which our convenience and comfort are consulted, or our vanity gratified, would be both tedious and useless. Even when one is standing amidst the din of ten thousand spools; and the sounding of as many shuttles, he has scarcely any distinct comprehension of the intermediate steps by which he sees the wonderful results produced; and must himself become a weaver, or a spinner, before he can detail to another the particulars of these seemingly simple arts. Yet my impressions have not been altogether too vague for description.

It was a new fact to me, that the most beautiful of the chintzes are stamped by means of copper cylinders, on which the figures are engraved; these cylinders are covered with the proper substance, and then impressed on the stuffs by rolling.

The velvets are woven at first without any of that downy coating, which makes them so pleasant to the touch. The threads which are to form this shag, are, in the first instance, inserted at both ends in the very texture of the cloth, so as to produce a vast number of small loops, running in rows from one end of the piece to the other. These loops are cut by hand. The cloth is extended horizontally on a machine, and the artist inserts among the loops a long slender knife, much resembling a very delicate sword; this, guided by one hand only, he pushes along so dexterously, as to cut the whole series of loops for several yards, at one thrust, without piercing the cloth, unless a knot or other obstacle turns his instrument aside. This operation being repeated along every thread in the whole breadth of the piece, a shag is at length raised over the whole surface. But it would be very rough and inelegant if left in this state.

To remove its roughness, the whole piece is made to pass rather slowly over a red hot iron cylinder, and in absolute contact with it; and during the whole operation, the iron is maintained at a red heat, by the aid of a furnace. I would not assert a thing seemingly so incredible, had I not witnessed the process; and my astonishment was not less than your incredulity will be, provided the fact be new to you. This operation is not confined to the velvets. Most of the cotton goods are singed in the same manner, to smooth them for the final finishing; and they assured me, (what indeed appears scarcely credible) that the finest muslins were treated in the same way.

The new process of bleaching is now extensively introduced at Manchester, and has, I believe, nearly subverted the old. The bleaching which used to occupy months, is now performed in a few days.

Manganese, sulphuric acid, water and common salt, are placed in large leaden stills, heated by steam. A very suffocating and corrosive gas rises, which is made to pass into water, having abundance of lime suspended in it; the lime condenses the gas, and produces with it the bleaching drug, into a solution of which the goods are plunged, and it is wonderful with what rapidity the colour is discharged. Some weak acid is usually added to liberate the bleaching principle. This method of bleaching is a discovery of modern chymistry; and when you consider that all the coloured cotton stuffs must be first bleached before they can be dyed, you will see at once the great importance of the discovery. The saving is in time, for the materials are more costly than those employed in the old way.

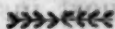
A great deal of American Sumac is used here in dying. I learned in one of the dye-houses, that the Americans give themselves unnecessary trouble in grinding

§ The powdered mastic.

this article, and that it is quite as useful in the state of leaves, merely dried, and packed in that condition. Probably there may be so much saving in freight, in consequence of grinding, as to pay for that operation.

The factories here are very numerous, and wonderfully extensive. Some of them employ 1200 people, notwithstanding the application of the steam engine, as a moving power, in a great multitude of the processes. The country, for many miles around Manchester is tributary to the great factories. Spinning, weaving, and other preliminary operations, are performed in the villages and cottages, and the fabrics are brought into town to be finished. While I was walking with some of my stage companions through a village near Warrington, a shower caused us to seek shelter in the cottages, and we found the people employed in this manner; their appearance was neat, cheerful, and comfortable.

[Silliman's Travels.]



For the Agricultural Museum.

THE ADVANTAGE OF WORKING OXEN.

Among the subjects which claim the notice of the American Agriculturalist, *The Advantages to be derived from working OXEN* is one of no small importance. The writer had flattered himself that it would have employed the pen of some gentleman of experience, and occupied a place in the Agricultural Museum at a much earlier period. Sorry that his expectations have as yet been disappointed, he would make an effort to direct the attention of the public to an object which he conceives to be of great and encreasing utility. He promises but little from his own resources. His opportunity for observation and experiment has been limited. He will therefore confine himself in a great measure, to an Exhibition of the beneficial results which have accrued, in other places, from the use of these valuable animals; and, with this

view, will take the liberty to offer the following Extracts from the Agricultural Survey of Norfolk in England.

“ Next to the recommendation of the best modes of culture, the cheapest means of effecting it, deserve our attention, and, lastly, frugality in the consumption of the produce.

“ If it is a fact, which cannot be disproved, that oxen, in some sort of work, are equal to horses, in these cases, they certainly ought to be preferred, because they are kept at considerably less expence, and less casualty attends them. It would evidently be very much for the advantage of this country, if oxen were in higher estimation than they are: upon every farm where three teams are kept, one of them, at least, ought to be an ox team; for though oxen would not, perhaps, entirely answer the end, to the total exclusion of horses, there is, undoubtedly, a great deal of work that they would, as before observed, do as well, particularly in carting and all heavy work. In most instances, they are nearly equal to horses, and, in their support, they are fully thirty per cent. cheaper. There is this country, a strong prejudice against this generous animal, which is the first thing to get over—when that can be removed, the credit of the ox will soon follow.

“ The principal advantage which the farmer would derive from oxen, is in the moderate expence of their keep, and in their being attended, as I have before observed, with less risk.

“ The best way is, however, not to over-work them, for in that case, they will require rather more hay than a horse, and half as much corn, and if they are suffered to fall into low condition, it will require considerable expence and time to get them up again.

“ In the summer months they should have a pasture to run in, where there is plenty of water and an open shed, where they should have a bait, on the days they are worked, of green vetches, cut grass, or any thing the

farm might furnish. In the winter, they should be kept in a yard, with the same sort of shed for them to run into at pleasure, and here they should have plenty of barley or oat straw, and offal turnips, and in the days of working, cut hay and straw, mixed in equal proportions, instead of straw, and turnips besides. In this manner, they will, in general, do extremely well, and will, at all events, earn as much as the value of their keep, so that their work will be had for nothing. Another great advantage is, that in case of falling lame, there is no diminution, by that means, in their value, for if their shoulders do not return a profit, their ribs will; but if a horse falls lame, at least half his value is lost. So far I have described the advantage of the ox to his employer—but to the public, the advantage is superlatively striking.—The ox, when labouring, does not consume so much corn as the horse, for, according to my plan, he would not consume any; and when his labour is done, his body goes to the nourishment of men—but the body of the other is good for nothing but to feed dogs.

“The more the number of horses can be lessened, the better for all ranks of people. The consumption by horses, especially horses of pleasure, and luxury, is astonishing; for though a horse in agriculture, does not consume above three acres of the fruits of the earth in a year, a horse kept upon the road, eats yearly, in hay and oats, the full produce of five acres of land. A man, allowing him a pound of bread, and a pound of meat a day, or in that proportion, not quite an acre and a quarter; and as the poor eat but very little meat—it cannot be put at more than an acre to them: so that one of those horses eats nearly as much as five men. The more, therefore, we reduce our number of horses, the more plentiful will be the fruits of the earth for man.”

[To be continued.]

THE ALMS HOUSE.

"For the support and employment of the Poor," of Philadelphia, is an institution of great benefit to paupers, and relieves the citizens of Philadelphia from a heavy burden, by the prudent economy of its management.—An account of its operations has been published. From this we learn, that 1294 poor men, women, and children, on an average, have been constantly supported during the year ending May 23, 1810; sometimes there were 1482 paupers receiving relief.

In the manufactory which had purchased raw materials, machinery, &c. to the amount of 17230 dollars, there has accrued a profit of near 4000 dollars—there having been sold manufactured goods amounting to 11,616 dols.

The whole expenditure of the Alms House and House of Employment in the past year, after deducting clothing provisions, &c. on hand at the beginning, is 76,035 dollars, a small sum compared with the quantity of misery relieved and comfort dispensed.

The spinning of cotton, flax, and tow, the hatching of flax, and weaving of various sorts of goods, form very considerable items; but the relief afforded by the Medical Department of this House of Charity to persons afflicted with every species of disease, is the most striking feature in this good Samaritan Picture.—Of 2095 patients admitted, 1445 have been cured, 164 relieved, and 264 remain under treatment. From the list of cured we extract the following: Of abscess 8—asthma 12—atroph 10—burns 17—catarrh 82—cholera morbus 18—diarrhœa 70—dropsy 20—intermittent fever 50—remittent or bilious 13—typhus 4—gout 3—inflammation of the stomach 25—leprosy 1—MANIA 67!—natural small pox, 28—pleurisy 41—rheumatism 76—scrophula 13—consumption. 12.

This institution is worthy of imitation by every great city; being as good a model, perhaps, as could be devised; combining labor with charity, preventing idleness, and relieving poverty from famine and disease.

§ One patient died of this disease, while 17 patients vaccinated, all recovered.

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